



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Aaron BEDDES et al.

Serial No.: **10/630,495**

Filed: July 30, 2003

For: **SUB-PULSE WIDTH MODULATION FOR GAMMA  
CORRECTION AND DIMMING CONTROL**

Customer No.: **29540**

7 Times Square  
New York, New York 10036-7311  
212-297-5800

**DECLARATION OF RONALD E. BROWN**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

S I R:

Ronald E. Brown does declare as follows:

1. I am a member of the bar of the state of New York.
2. I am registered to practice before the U.S. Patent and Trademark Office. My registration number is 32,200.
3. I am employed by the law firm of Pitney Hardin LLP.

4. I was involved in the preparation of the above-identified application, which has a filing date of July 30, 2003.

5. I have been informed by inventor Aaron Beddes of the following.

6. Aaron Beddes informs me that at a date which was prior to July 30, 2002 (that is, more than one year prior to filing of the present application), “we completed what we thought was a working version of FPGA (field programmable gate array) firmware that implemented sub-PWM [sub pulse width modulation] for both gamma and dimming. Gamma correction was tested and known to be good. However, we needed software support to test the dimming side, and since our software guys were swamped, we had to wait.”

7. Aaron Beddes informs me that at a date which was prior to July 30, 2002, “we released the new daughter card (the board that implemented the improved gamma correction) with sub-PWM to production. Dimming was also implemented, but still not thoroughly tested”.

8. Aaron Beddes informs me that at another date which was prior to July 30, 2002, “The first daughter cards with sub-PWM were shipped to customers at no added cost. These customers did not use the dimming portion of the design.”

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9. Aaron Beddes informs me that on a date after July 30, 2002, "Steev [sic?] Fannesbeck, per my instructions, implemented the necessary software upgrades to take advantage of the improved sub-PWM dimming. In that same month [after July 2002], the software was shipped to the first site to use all the features gained by sub-PWM (Indiana Rail-cats baseball stadium). The new dimming capability was also not sold to the Rail-Cats, but rather was a free upgrade that we gave them because it was easy and convenient for us to do at that time."

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Ronald E. Brown", with a stylized, sweeping flourish at the end.

Ronald E. Brown  
Registration No. 32,200

212.297.5800  
Pitney Hardin LLP  
7 Times Square  
New York, NY 10036-7311